Sears, Roebuck & Co. Models 7115, 7116, 7117, 101.825

Preliminary

APPROXIMATE F.M. I.F. ALIGNMENT

Indicating meter connection.....DC voltmeter connected across R24
Generator ground lead connection.....Chassis
Generator output lead connection.....See Chart Below
Generator modulation.....Off
Position of volume control.....Fully on
Position of tone control.....Treble (fully clockwise)
Position of pointer with tuner fully closed.....Last line below 88 Mc.

Wave Band Switch Position	Position of Tuner	Generator Frequency	Dummy Antenna	Generator Connection	Trimmer Adjustments (in order shown)	Trimmer Function
F.M. (Counter-clockwise)	Closed	10.7 Mc.	0.1 mfd.	Transl. Grid	C41, C40, C32 C29, C25, C22	I.F.

Adjust for a maximum reading on DC voltmeter. As trimmers are adjusted, decrease the output of the generator to maintain approximately 2 volts.

FINAL A.M. ALIGNMENT

Output meter connection.....Across loudspeaker voice coil
Generator ground lead connection.....Chassis
Dummy antenna value to be in series with generator output.....See Chart
Connection of generator output lead.....See Chart
Generator modulation.....30%, 400 cycles
Position of volume control.....Fully on
Position of tone control.....Treble (Fully clockwise)
Position of pointer with tuner fully closed.....Last line below 540 calibration mark
AM ant. selector switch in "up" position.....

Wave Band Switch Position	Position of Tuner	Generator Frequency	Dummy Antenna	Generator Connection	Trimmer Adjustments (in order shown)	Trimmer Function
BC (center)	Closed	455 Kc.	0.1 mfd.	Transl. Grid	C33, C30, C26, C23	I.F.
BC	1500 Kc.	1500 Kc.	200 mmfd.	Ant.	C13	Osc.
BC	1500 Kc.	1500 Kc.	200 mmfd.	Ant.	C11	R.F.

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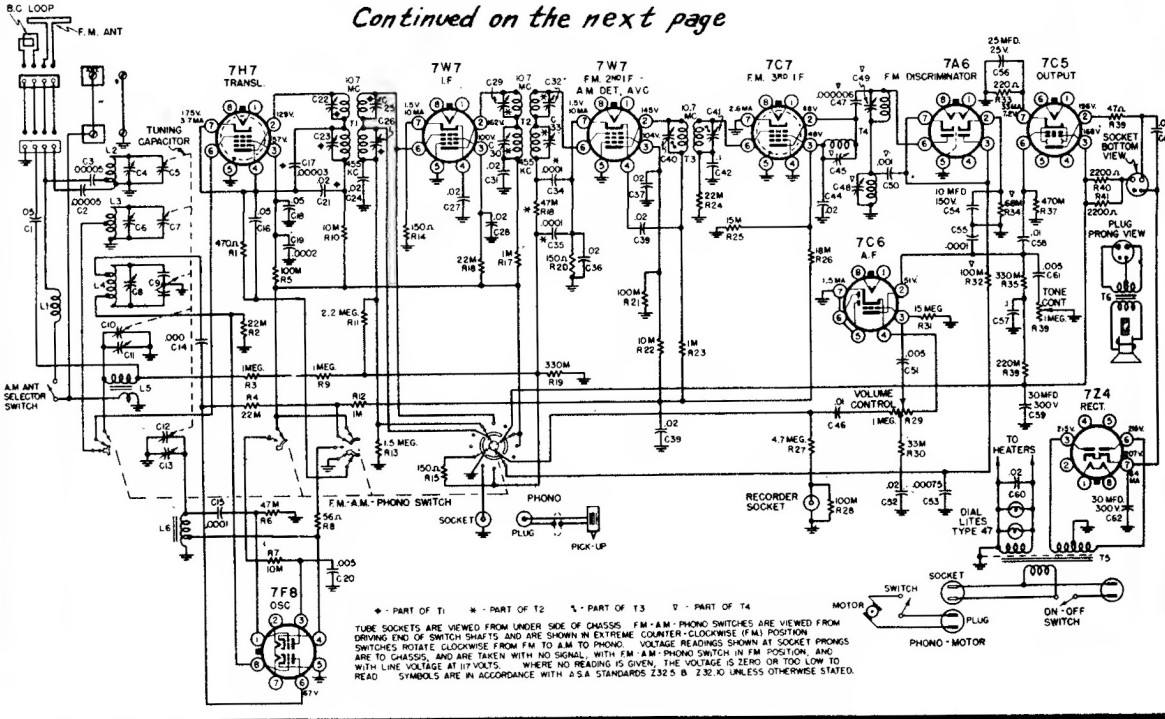

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FINAL F.M. ALIGNMENT

A. If a 10.7 Mc. frequency modulated generator is available, connect to translator grid through e 270 to 500 ohm resistor and proceed to Section C.

B. If no 10.7 Mc. frequency modulated generator is available, connect an R.F. - F.M. generator to the F.M. antenna terminals.

C. Connect 5000 ohms (if generator sweep frequency is 60 cycles) to ground in parallel with R24. For lower frequency sweep increese the 5000 ohm resistor proportionately. Connect the Y-axis (vertical) amplifier of an oscilloscope across R24 to ground. Put a 10,000 to 100,000 ohm resistor in series with oscilloscope lead (at receiver end) to provide R.F. filterings.

D. Connect the sweep output of the generator to the X-axis (horizontal) amplifier of the oscilloscope.

E. Adjust modulation for a 300 Kc. deviation and touch up alignment of C41,C40,C32,C29,C25 and C22 for a symmetrical pattern on oscilloscope. Use full gain of the oscilloscope Y-axis amplifie and only as much output from the generator as is necessary. See FIG. 1A,(PAGE 11) for approximate pattern.

F. Remove the oscilloscope and the two resistors that were added in Section C above. (Restore receiver to normal operating condition).

G. Connect the Y-axis (vertical) amplifier of the oscilloscope to the ungrounded side of C53 through 10,000 to 100,000 ohms at receiver end of lead.

H. Adjust C45 for maximum output, vertically.
Adjust C48 and C49 until the center of the pattern becomes a straight line diagonally across the oscilloscope screen. Re-peak these three trimmers to obtain a symmetricel pattern of maximum vertical amplitude. See oscilloscope pattern, FIG. 1B, (PAGE 11).

I. Remove the generator. Remove the oscilloscope and resistor from C53, and replace across R24 as dascribed in Section C above.

J. Connect an R.F. F.M. generator to the terminals marked F.M. antenna through two 120-ohm resistors, one in series with each terminal of the generator. Adjust the generator for 300 Kc. deviation.

K. Tune the generator to 109 Mc. Set pointer to 109 Mc. Adjust C8 to obtain 3rd. I.F. oscilloscope pattern. See FIG 1A (PAGE 11). (If two such points are found by tuning C8, use the higher frequency.) (Lowest capacity setting of C8).

L. Tune the generator and receiver to 106 Mc. and peak C6 and C4 for maximum vertical amplitude on the oscilloscope. (See FIG. 1A below).

M. Remove the signal generator, oscilloscope and resistors, restoring the receiver to normal operating condition.